

Having described the invention, we claim:

1. A method of forming a tamper resistant seal on a plastic bag containing a loaf of bread comprising the steps of:

flattening a portion of the neck of the bag adjacent the open end of the bag;

forming a first sealed strip on a segment of the flattened portion such that the product in the bag is not accessible;

gathering the flattened portion of the bag between the sealed segment and the product; and

attaching a reusable closure to said neck.

2. A method according to Claim 1 with the addition of the step of perforating the bag between the sealed strip and the product in the bag for forming a strip of perforations.

3. A method according to Claim 1 with the addition of the step of: forming a second sealed strip on a segment of the flattened portion, said second sealed strip being spaced from said first sealed strip.

4. A method according to Claim 3 with the addition of the step of: perforating the bag between the first and second sealed strips.

seal ———
— — — — —
seal ———

5. The method of Claim 1 wherein the step of forming a first sealed strip on a segment of the flattened portion comprises moving the neck of the bag such that streams of heated air impinge on the surface of the bag for fusing panels on the bag together to form a sealed strip.

6. The method of Claim 5 wherein the step of forming a first sealed strip comprises the steps of:

delivering air heated to a temperature in a range between about 315° and 600° Fahrenheit in a stream to impinge against the surface of the bag; and

gripping portions of the bag adjacent opposite sides of the segment of the bag against which the stream of air impinges.

7. A method for forming a tamper resistant closure on a plastic bag containing a product comprising the steps of:

forming a row of perforations in the bag;

gripping the bag at spaced positions adjacent the row of perforations; and

directing temperature controlled air to impinge against the bag between the gripped positions for forming a pair of spaced sealed strips adjacent the row of perforations.

Same as
d. 5

8. Apparatus for forming a tamper evident closure on a plastic bag containing a product comprising:

means for gripping spaced portions of the bag;

means for forming a row of perforations in the bag adjacent the gripped portions of the bag; and

means for delivering temperature controlled gas to impinge against the surfaces of the bag between the gripped portions for fusing portions of the bag between the gripped portions for forming hard and soft sealed strips, said perforations being positioned to permit removal of the hard sealed strip.

diff. than parent w/ one seal

9. Apparatus for forming a tamper evident closure on a plastic bag according to Claim 8, said means for gripping spaced portions of the bag comprising horizontally spaced upper belts and horizontally spaced lower belts, said horizontally spaced upper and lower belts being arranged to engage spaced portions on the neck of a bag such that the neck bridges space between the belts.

Same as
d. 7

10. Apparatus for forming a tamper resistant closure on a plastic bag according to Claim 8, said means for forming a row of perforations in the bag adjacent the gripped portions comprising an anvil having a slot formed therein adjacent one side of the neck of the bag and a perforator wheel having cutter teeth positioned adjacent the other side of the bag neck such that said teeth perforate the bag and extend into the slot formed in the anvil when a bag neck moves between the anvil and the perforator wheel.

Same as
d. 8

11. Apparatus for forming a tamper resistant closure on a plastic bag according to Claim 8, said means for delivering temperature controlled gas to impinge against the surface of the bag comprising an upper manifold positioned above the neck of the bag and

a lower manifold positioned below the neck of the bag; and means for delivering air through said upper and lower manifolds for impinging against the neck of the bag, said air being heated to a temperature sufficient for melting the bag neck for forming a sealed strip extending generally parallel to said row of perforations.

12. Apparatus for forming a tamper resistant closure on a plastic bag according to Claim 11 with the addition of a diverter valve adjacent each of said upper and lower manifolds, said diverter valve being actuatable to divert air flow from said upper and lower manifolds and to exhaust air, without interruption of the flow of air into the diverter valves.

13. Apparatus for forming a ^{tamper} tamper resistant closure on a plastic bag containing a product comprising:

a conveyor for moving a plastic bag containing a product along a path, said bag having an open end forming a neck extending beyond the product in the bag;

an air nozzle for flattening the open neck as the bag is moved by said conveyor;

a pair of upper brushes and a pair of lower brushes, a first of said pair of upper and lower brushes having bristles arranged to engage the flattened neck of the bag and draw the bag transversely across said conveyor, second upper and lower brushes having angularly inclined bristles for moving the leading edge of the bag neck longitudinally of the conveyor while the trailing edge of the bag neck is engaged by the first upper and lower brushes;

a pair of upper belts and a pair of lower belts, said upper and lower belts being horizontally spaced apart such that one of said upper belts and one of said lower belts engage opposite sides of a portion of the neck of the bag and one of said upper belts and one of said lower belts engages a second portion of said bag neck such that a portion of the bag neck bridges space between the upper pair of belts and the lower pair of belts;

a perforator wheel adjacent one side of said bag neck and an anvil having a slot formed therein adjacent the other side of the bag neck, said perforator wheel forming a row of perforations in the neck of the bag moved by said upper and lower belts; and

upper and lower air dispensers positioned to deliver heated air to impinge against upper and lower surfaces of the portion of the bag neck bridging between the belts for melting and forming a sealed strip across the entire width of the bag neck for forming a seal extending generally parallel to the row of perforations formed in the bag neck.